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APPLICATION NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NO.
08/269,323	06/30/94	NIMITZ	J 2124001D

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EXAMINER	
ANTHONY, J	
ART UNIT	**PAPER NUMBER**
1208	16

DATE MAILED: 02/05/97

This is a communication from the examiner in charge of your application.
COMMISSIONER OF PATENTS AND TRADEMARKS

OFFICE ACTION SUMMARY

☒ Responsive to communication(s) filed on 11/4/96.

☒ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 D.C. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire THREE month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 157-158, AND 160-182 is/are pending in the application.

Of the above, claim(s) 180-182 is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 157-158, 160-167, 169-175, AND 177-179 is/are rejected.

☒ Claim(s) 168 AND 176 is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____.

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☐ Notice of Reference Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

-- SEE OFFICE ACTION ON THE FOLLOWING PAGES --

★ U.S. GPO: 1996-409-290/40029

Serial Number: 08/269,323
Art Unit: 1208

FINAL REJECTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 157-158, 160-167, 169-175, and 177-179 are rejected under 35 U.S.C. § 103(a) as being obvious over "The Technical Report" distributed by the Defense Technical Information Center, Alexandria, Va..

The Defense Technical Information Center Technical Report directly discloses applicants' claimed fluoroiodoalkane species of **CF_3I**, **CF_2ICF_2I**, and **CF_3CF_2I** as effective fire-extinguishing agents and fire-suppression agents, see Table I, pages 9-10, and Table II and Table VII. Furthermore, on pages 39-43 and 62, the reference directly suggests the use of binary mixtures of halogenated carbons and halogenated hydrocarbons as fire

extinguishing agents. Such binary mixtures are deemed to include binary mixtures wherein fluoroiodoalkanes are one of the components, since such fluoroiodocarbons are directly taught by the reference in Tables I, II, and VII as effective fire-extinguishing agents. In Table VII on page 62 a binary mixture of methyl iodide and bromoethane is directly taught. Directly taught types of halogenated carbons are the perflurocarbons such as applicants' directly claimed species of **perfluorobutane** and **perfluoroethane,** see Table I, pages 9-10, and Table II and Table VII. Directly taught types of halogenated hydrocarbons are the fluorohydrocarbons, such as applicants's directly claimed species of **trifluoromethane**, see Table I, pages 9-10, and Table II and Table VII. On page 16 the reference suggestions are made on ways of determining the appropriate concentration range of the fire-extinguishing agents and/or fire-suppression agents. On page 39 under the heading "Effect of Binary Mixtures of Halogen Compounds", the reference directly talks about binary mixtures <u>having a boiling point</u>. Although the words "azeotropic blend" or "near azeotropic blend" are not directly used, the fact that the reference speaks of binary mixtures <u>having a boiling point</u> and not a boiling range implies if not explicitly at least implicitly

that "azeotropic blend" or "near azeotropic blend" are being contemplated by the reference.

Applicants' invention is deemed to differ from the applied reference in the following ways: 1) There is no specific teaching (i.e. by way of a specific example) that explicitly teaches an "azeotropic blend" or "near azeotropic blend" of a fluoroiodocarbon and an additive selected from the group consisting of perfluorocarbons, hydrofluorocarbons and fluoroethers, used together to extinguish a fire, as claimed by applicants' in claims 157-158, 160-167, 169, and 178-179, and 2) There is no specific teaching (i.e. by way of a specific example) to where the fire-extinguishing agent comprises a blend of a fluoroiodocarbon and an additive selected from the group consisting of perfluorocarbons, hydrofluorocarbons and fluoroethers used together to extinguish a fire, as claimed by applicants' in claims 170-175 and 177.

In regards to the first and second differences, applicants' invention is deemed to be at once envisaged by one having ordinary skill in the art from the teachings and suggestions of the reference taken as a whole, since the reference directly teaches applicants' claimed species of fluoroiodocarbons,

perfluorocarbons, and hydrofluorocarbons as individually useful fire-extinguishing agents. The reference also directly teaches and suggests employing binary mixtures of halogenated carbons and halogenated hydrocarbons as fire extinguishing agents, see TABLE VII. Furthermore, the reference is deemed to strongly suggest, at least implicitly, applicants' claimed "azeotropic blend" or "near azeotropic blend" fire extinguishing agents on page 39 under the heading "Effect of Binary Mixtures of Halogen Compounds", where the reference directly talks about binary mixtures having a boiling point. Thus the reference is deemed to sufficiently motivate one having ordinary skill in the art to use admixtures of fluoroiodocarbons with another known fire extinguishing agent, such as perfluorocarbons or hydrofluorocarbons in fire extinguishing processes. In any case, the courts have constantly declared that to combined, even with a somewhat greater result, two or more materials in combination for the same purpose that they are taught as being individually useful is not patentable without a clear showing of superior and unobvious results, since it is logical that the materials would supplement each other, In re Kerhoven, 205 USPQ 1069 (CCPA 1980), and In re Crockett et al. 126 USPQ 186.

Allowable Subject Matter

3. Claims 168 and 176 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claims and any intervening claims.

Claims 168 and 176 are deemed to be free of any prior-art rejection over, "The Defense Technical Information Center Technical Report", because the said Report neither teaches nor suggests that fluoroethers are known fire extinguishing agents. As such, it would have not have been obvious to one having ordinary skill in the art to combined fluoroiodocarbons, which are directly taught by the Report as effective fire extinguishing agents, with fluoroethers since there is no motivation within the Report itself to use fluoroethers either singlely or in combination with any other fire extinguishing agent such as fluoroiodocarbons.

Response to Amendment

4. Applicants' Request for Reconsideration, and the Declaration filed under 37 C.F.R. 1.131, both filed on 11/04/96, have been

carefully considered but are not deemed to put claims 157-158, 160-167, 169-175, and 177-179 in condition for allowance.

First, applicants' said Declaration is deemed to have demonstrated the conception of applicants' invention prior to November 12, 1992. As such, the previous use of JP patent No. 4-323294 as prior-art has been obviated.

Secondly, the examiner takes issue with applicants' characterization of the examiner's statement in the previous office action that somehow the examiner was asserting that the applied Report directly teaches (i.e. by way of a specific example) processes of fire extinguishing using mixtures of fluoroiodocarbons and another fire extinguishing agent selected from halogenated carbons or halogenated hydrocarbons. As shown in the body of the rejection mailed 5/1/96, and in applicants' direct quotation of the examiner's statement in the that said rejection, on page 4, lines 5-10, of applicants' present Request for Reconsideration, the examiner stated: "the reference directly suggests binary mixtures of halogenated carbons and halogenated hydrocarbons including binary mixtures where fluoroiodoalkanes is one of the components.". The examiner acknowledges that there is no direct teaching, by way of an example, to such an admixture,

rather the examiner asserts that the said Report provides amply motivation to one having ordinary skill in the art to formulate such mixtures and to use them in fire-extinguishing processes.

Thirdly, applicants' arguments, on pages 4-7 of the Request for Reconsideration, that the said quoted statement of the applied Technical Report, as found in the bridging paragraph on pages 2 and 3 of the said Report, does not motivate one having ordinary skill in the art to formulate fire-extinguishing admixtures comprising a fluoroiodocarbon and an additive selected from perfluorocarbons and hydrofluorocarbons is wholly rejected. A reading of the entire Technical Report shows that binary mixtures of fire-extinguishing agents are disclosed as advantageous in many circumstances depending on the characteristics of the particular mixtures used as fire extinguishing agents. Although the Technical Report does state that no generalization could be made regarding the choice of constituents used in the said mixture, such a statement is not deemed to teach or suggest away from applicants' claimed invention. In the first place, the examiner has provided sufficient motivation and support for the rejection of applicants' claims, see section 2 of this office action.

Secondly, applicants' assertion that the Report fails to provide any overall motivation for the successful combination of binary mixtures of fluoroiodocarbons with either perfluorocarbons or hydrofluorocarbons, is given little weight for the following reasons: 1) There is no PER SE requirement in patent jurisprudence that the applied prior-art has to teach and/or directly suggest that the combination of two or more components will result in an improvement as compared to the use of the said components separately. Rather, it is required that the applied prior-art motivate one having ordinary skill in the art to make the said combination whether the combination has superior or inferior properties as compared to its subcomponents., b) As shown above, the applied Report provides sufficient motivation to form admixtures of known fire extinguishing agents. In fact, applicants preferred fluoroidocarbon species and preferred perfluorocarbon species and preferred hydrofluorocarbon species are all directly and specifically taught by the Report as effective species for fire-extinguishing, see Table I, pages 9-10, and Table II and Table VII. Furthermore, on pages 39-43 and 62, the reference directly suggests the use of binary mixtures of halogenated carbons and halogenated hydrocarbons as fire

extinguishing agents. Thus for the ordinary artisan to form mixtures of these said preferred halogenated species is just following what the disclosure would reasonable suggest to one having ordinary skill in the art after reading it. The Examiner position is further supported by the courts which have constantly declared that to combined, even with a somewhat greater result, two or more materials in combination for the same purpose that they are taught as being individually useful is not patentable without a clear showing of superior and unobvious results, since it is logical that the materials would supplement each other, In re Kerhoven, 205 USPQ 1069 (CCPA 1980), and In re Crockett et al. 126 USPQ 186. Thus a *prima facia* case of obviousness has been established by the examiner., and c) Applicants' have not rebutted the established case of *prima facia* case of obviousness since they have shown neither superior nor unexpected results for their particular claimed fire-extinguishing admixtures as compared to those admixtures directly taught by the Technical Report.

Specification

5. Note: If applicants decide to put the present application in

condition for allowance by rewriting dependent claims 168 and 176 in independent form including all of the limitations of the base claims and any intervening claims, then applicants should rewrite the title of the invention and the ABSTRACT of the invention since they both are not sufficiently descriptive of the allowable subject matter. This action by applicants will speed the prosecution of the present application.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for response to this final action is set to expire THREE MONTHS from the date of this action. In the event a first response is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event will the statutory period for response expire later than SIX MONTHS from the date of

this final action.

Examiner Information

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Joseph D. Anthony whose telephone number is (703) 308-0446. This examiner can normally be reached on Monday through Friday from 9:00 a.m. to 5:30 p.m. in the eastern time zone. If attempts to reach the examiner are unsuccessful, the examiner's supervisor, Sharon Gibson, can be reached on (703) 308-4552. The group 1200 FAX machine number is (703) 308-4556. Unofficial correspondence transmitted by FAX must be marked "DRAFT". All other papers received by FAX will be treated as Official communications and cannot be immediately handled by the Examiner. Any inquiry of a general nature or relating to the status of this application should be directed to the Customer Service Center receptionist whose telephone number is (703) 308-1235. The Customer Service Center is located on the Seventh Floor of CM-1 and will be the welcome point for all visitors to the building.

Joseph D. Anthony

JOSEPH D. ANTHONY
PATENT EXAMINER
GROUP 1200

1/2/97